Lake Huron *Update*

Did you know...?

- Lake Huron was once known as the "Lake of the shaggy-haired tribe" after the first French explorers' impression of the area's native residents.
- Manitoulin, an island separating the North Channel from Georgian Bay and Lake Huron proper, is the largest freshwater island in the world.
- Lake Huron was the first of the Laurentian Great Lakes to be discovered.
- Lake Huron is the second largest Laurentian Great Lake in surface area and third largest in volume. It is the third largest freshwater lake in surface area and also sixth largest in volume in the world.


Tom Gagon

- The Lake Huron basin ranks second lowest of all the Great Lakes in number of human inhabitants. Saginaw Bay contains 37 % of the Lake Huron inhabitants.
- Pollutant loadings to Lake Huron from water sources are the lowest of all the Great Lakes, while air sources are the highest.

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Lake Huron Initiative

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1 The Lake in the Middle

Lake Huron has been called "the lake in the middle" both geographically and in environmental quality. Lake Huron receives water from two of the Great Lakes, Lake Superior and Lake Michigan; it sends water to Lake Erie and Lake Ontario.

Lake Huron has relatively good water quality. It has lost significant areas of high value coastal wetlands, yet the fishery is relatively healthy.

This Great Lake supplies drinking water to 1.5 million people. In addition, Lake Huron's connecting channels, the St. Marys and St. Clair Rivers, provide drinking water for another four million people.

2 Habitat is Critical

In many of the other Great Lakes, chemical contaminants are a major concern. For Lake Huron, habitat is a primary concern. Even though pollutants (principally through fish consumption advisories) are a problem in Lake Huron, there are few sources of persistent toxic contaminants within the Lake Huron basin. Future efforts need to be directed toward controlling out-of-basin sources of atmospheric deposition and restoring and protecting habitat within the Lake Huron basin. These efforts are important for all of the Great Lakes as well.

Lake Huron has been impacted by human activity to a point that the loss of fish and wildlife habitat is now a serious concern. One of the keys to restoring the lake is the protection of existing critical habitat and the restoration of degraded habitat including those within the lake itself and its tributaries and wetlands.

The ecological well-being of Lake Huron is determined to a great extent by the condition of its tributaries. The tributary streams provide critical habitat for spawning and young fish. Many of the lake's tributaries have been severely degraded because of dams, sedimentation, nonpoint source pollution and land-use practices.

3 Ecosystem Objectives

Local Lake Huron restoration efforts need to focus on Lake Huron fisheries, wildlife and biodiversity within the watershed. Significant research efforts toward restoration have been undertaken, yet Lake Huron fish and wildlife continue to be exposed to a multiplicity of physical, chemical, and biological stresses. In terms of importance, major stresses that affect the biodiversity of Lake Huron fish and wildlife communities are:

- degradation and loss of historical habitat in tributaries (principally impassable dams) and nearshore habitat, including coastal wetlands;
- eutrophication (excess nutrients) in localized areas;
- effects of harmful exotic species;
- effects of over-fishing; and
- impact of persistent toxic contaminants.

Lake Huron Drainage Basin

Legend
Watershed unavailable to Great Lakes fish due to dams

Historical lake trout spawning areas

4 Critical Areas

Specific areas within the Lake Huron basin that are significantly degraded are considered Areas of Concern. Two Canadian sites, Spanish River and Severn Sound, are responding well to remedial actions and showing recovery. One additional site, Collingwood Harbour, Ontario, was the first, and remains the only, Area of Concern to be restored. The only site solely in Michigan, Saginaw River/Saginaw Bay, is designated as an Area of Concern primarily because of fish consumption advisories, contaminated sediments and nonpoint pollution sources. Pollutants of concern include nutrients (principally phosphorus) and pathogens.

Of equal importance are the areas of high quality habitat in the lake. These include areas such as Saginaw Bay, St. Marys River, Misery Bay, Eastern Georgian Bay, Manitoulin Island and the Bruce Peninsula.

5 Harmful Exotics

Historically, there was a diverse population of fish species native to Lake Huron. Now, there are over 145 nonindigenous species, both aquatic and terrestrial, within the Great Lakes basin, many of which are found in the Lake Huron basin.

Nonindigenous species, also referred to as non-native, exotic and alien species, threaten the diversity and abundance of native species and the ecological stability of Lake Huron. Also impacted are commercial, agricultural and recreational activities. Since the 1800s, exotics such as zebra mussels, ruffe, and gobies are believed to have been introduced into the Great Lakes from ballast water discharged from ocean vessels.

Not only do invasive species compete with native species for food and habitat, they may also increase the cycling of persistent bioaccumulative chemicals in the food chain.


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One of the most common exotics found in Saginaw Bay is Eurasian watermilfoil. This plant forms thick mats on surface waters and can interfere with many types of recreational activities.

The sea lamprey is another exotic species present in Lake Huron. Lamprey populations are at their highest near the northern point of Lake Huron in the St. Marys River. This river has been providing suitable habitat


Great Lakes Fishery Commission

for lamprey spawning. Preliminary assessments show significant reductions in sea lamprey larvae in the St. Marys River since extensive international efforts began in July of 1998. These efforts sought to eliminate 92 percent of the sea lamprey produced in the river, thereby achieving the goal of reducing the populations in Lake Huron and northern Lake Michigan by 85 percent over the next 15 years.

6 What is the LHI?

The *Lake Huron Initiative (LHI)* was established by representatives from the Michigan Office of the Great Lakes, state, provincial, federal and local agencies and interest groups with a common goal "to restore and maintain the chemical, physical, and biological integrity of the waters, tributaries, and nearshore terrestrial and aquatic ecosystems of Lake Huron." The focus for the *LHI* is to work with all levels of government and private interests toward restoration and continued protection. Also, the *LHI* is working with similar interests toward restoring the chemical environment of the lake through targeted pollution prevention efforts and on-going sediment remediation efforts in the Saginaw and Pine Rivers.

With combined efforts, the *Lake Huron Initiative Action Plan* has been produced to identify priority issues and coordinate future efforts to ensure a sustainable Lake Huron.

7 What is the LHI Action Plan?

The *Lake Huron Initiative Action Plan* identifies trends regarding specific critical pollutants, use impairments and ecosystem objectives, and actions that can be taken to address the impairments within Lake Huron. The plan is not as extensive as a lakewide management plan, such as those being prepared for the other Great Lakes. However, the plan is an effort to address issues of common concern within the Lake Huron basin. The *LHI* has identified important future efforts focusing on two key issues:

- Fish and wildlife habitat and biodiversity and
- Critical pollutants/use impairments

Since the creation of the *LHI Action Plan*, the following actions have been undertaken:

- Development of a bi-national system to identify, map and quantify high-quality natural communities and important habitats (funded-ongoing)
- Initiate efforts to remediate impact of dams (ongoing)
- Sediment cleanups in Saginaw and Pine Rivers (funded-ongoing)
- Secure funding for the $177 million buffer strip program for the Saginaw Bay watershed (funded-ongoing)

Special Features

Georgian Bay

Georgian Bay is large enough to be among the world's 20 largest lakes by volume. Early explorers listed Georgian Bay as a separate sixth lake because it is nearly separated from the rest of Lake Huron by Manitoulin Island and the Bruce Peninsula. High-quality lake trout habitats are still present in Georgian Bay and near Drummond Island.


Georgian Bay Association

North Channel

Sheltered by Manitoulin and Drummond Islands, the North Channel is the home of hundreds of islands and an unspoiled, fresh-water boaters paradise. This channel is connected on the west end by the St. Marys River and on the east end by the Georgian Bay.


James W. Herbert

Saginaw Bay

This eutrophic bay is made up of a shallow inner bay with an average depth of 15 ft. and an outer bay with an average depth of 48 ft. The Bay has many sub-bays, which are believed to be prime nursery grounds for fish. Historically, Saginaw Bay supported the second largest walleye fishery in the Great Lakes, second only to that of Lake Erie.


Ducks Unlimited

Kayak cover photo: Kate Ter Haar
Canoe cover photo: Carol Swinehart
Watershed map: Geomatics Unit, Environment Canada

Check out our Lake Huron Initiative website at www.deq.state.mi.us/ogl/huron.html

To obtain a copy of the Action Plan, or for other information contact:

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